LEVEL II

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER MC-3-1	2. VT ACCESSION NO. AD-A093058	3. RECIPIENT'S CATALOG NUMBER ----
4. TITLE (and Subtitle) A Model to Predict Retention and Attrition of Hispanic-Americans in the Navy.		5. TYPE OF REPORT & PERIOD COVERED Technical
		6. PERFORMING ORG. REPORT NUMBER ----
7. AUTHOR(s) Susan P. Turner		8. CONTRACT OR GRANT NUMBER(s) N 00014-79C-0850
9. PERFORMING ORGANIZATION NAME AND ADDRESS MERIT Center College of Education, Temple University Philadelphia, PA 19122		10. PROGRAM ELEMENT. PROJECT, TASK AREA & WORK UNIT NUMBERS NR 170-897
11. CONTROLLING OFFICE NAME AND ADDRESS Organizational Effectiveness Research Programs Office of Naval Research (Code 452) Arlington, VA 22217		12. REPORT DATE October 1980
		13. NUMBER OF PAGES 38
14. MONITORING AGENCY NAME & ADDRESS(If different from Controlling Office) N00014-77-C-7130		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

----

18. SUPPLEMENTARY NOTES

DTIC
ELECTE
DEC 1 1 1980
S
D

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Hispanic-Americans   cross-cultural
retention   values
attrition   interpersonal relations
model of attrition

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)
After an exhaustive review of the cross-cultural literature on Hispanic-Americans, a longitudinal model was developed to explain and predict decisions to stay in or leave the Navy. The model approaches the decisions from the point of view of the individual, positing that staying or leaving depends on the continual interaction of background variables, feelings at entry, experiences in the Navy, and a general sense of commitment to the Navy. Experiences in the Navy are either social or occupational in nature, and staying or leaving depends in large part on the degree of integration

DD FORM 1473 EDITION OF 1 NOV 65 IS OBSOLETE
1 JAN 73
S/N 0102-014-6601 |

unclassified

Accession For	
NTIS GRA&I	☒
DTIC TAB	☐
Unannounced	☐
Justification_____	
By_____	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A	

20. Abstract (continued)

felt by the individual into the social and occupational systems of the Navy. Areas in which research is presently lacking are noted with suggestions for future research on Hispanic-Americans and their relation to the Navy.

A Model to Predict Retention and Attrition of Hispanic-Americans in the Navy

Susan P. Turner

MERIT Center and Department of Urban Education

Temple University

INTRODUCTION

In recent years, attrition has become an increasingly worrisome problem
for the armed forces of the United States. With the end of the draft and the
advent of the all volunteer armed forces, the percentage of men who fail to
complete their term of enlistment has grown. Although all branches of the
armed forces have been faced with this problem, the Navy's problem may be the
most severe. Already faced with difficulties in recruiting men able to master
the technology required in its modern equipment, it is then unable to retain
many of its highly trained personnel until completion of the first enlistment
or until retirement. The cost of training each man who leaves before completing
his first enlistment is high and cannot be recouped. However, costs other than
monetary are also high. The Navy is short some 21,000 experienced petty officers
(Time, 1980), forcing less qualified men to take on responsibilities normally
assigned to the more experienced men. This in turn results in lower morale of
men who complain that they have to "wing it" on repairs and operation of so-
phisticated equipment. As the rate of attrition rises, so does the concern of
the military as to how to retain its men. Studies have investigated the rela-
tionship between a host of variables and length of service in an attempt to in-
duct those who are most likely to complete their enlistment. As a result of
these studies, recruiting methods have been modified, entrance requirements have
been changed to allow only those most likely to complete their enlistment, and
personnel policies altered. Although each of the changes has contributed to
lowering attrition, the present rate, is still uncomfortably high.

1

A second concern of the military is that of the representation of ethnic and racial minorities. The Army and the Marines have been quite successful in attracting and inducting members of minority groups. However, the Air Force and the Navy show serious underrepresentation of blacks and Hispanics. Neither group has been attracted to those branches in large numbers, and many of those have not reached the minimum score on the Armed Forces Vocational Aptitude Battery (ASVAB) for induction into those branches. Attrition of the blacks and Hispanics who do pass the ASVAB compounds the problem. Little is known about minority attrition. Most studies of attrition conducted by the Navy and Air Force have treated all members as representative of a single population or have investigated attrition along racial lines. Attrition of Hispanics, an ethnic minority, has not been studied. Neither the attrition rate of Hispanics nor the related factors have been determined. Hispanics come from a different cultural background than the Anglo-Americans in the Navy. Many of the underlying values are different, resulting in some behaviors which may be misinterpreted by those not familiar with the culture. Experiences common to Anglo-Americans and Hispanic-Americans may affect each group differently, and they may not share the same expectations of behavior in many situations. At present, it is not known to what extent the Hispanics who successfully meet the requirements on the ASVAB test and successfully complete boot camp and further Navy training are similar to the Anglo-Americans who meet the same requirements. It is not known whether the reasons leading Hispanics to leave the Navy are the same or different from those leading Anglo-Americans to leave.

The present study is concerned with the question of attrition of Hispanics enlisted in the U.S. Navy. The purpose of the study is to develop a theoretical model which will help to predict attrition of Hispanic sailors by attempting to explain the processes of interaction between the individual and the Navy.

2

This study proposes to identify the factors associated with a Hispanic's decision to leave the Navy before completion of his enlistment, and to examine and explain the interaction among these factors. The model will focus on the individual and his perceptions of his environment. Due to the cultural differences between Hispanic- and Anglo-Americans, the perceptions of experiences in the Navy held by each may be quite different. For this reason, the model will not attempt to assess the accuracy of individual perceptions, but will attempt to identify where differences in perceptions occur and their effect on the decision to stay in or leave the Navy.

The study will address the following questions. What factors are related to the attrition of Hispanics from the Navy? What is the nature of the relationship and interaction among these factors? What is the nature of the interactions that results in a decision to leave the Navy prior to completion of enlistment?

DEFINITIONS

attrition: leaving the Navy prior to completion of the first term
of enlistment.

Hispanic-American: an individual who has identified himself as being
of Mexican-American, Puecto Rican, Cuban, or Latin-American
descent.

CROSS-CULTURAL STUDIES OF HISPANICS AND ANGLO-AMERICANS

Differences between the behaviors, values, or beliefs of two cultures can best be understood within the framework of the culture as a whole; that is, they must be considered as part of the overall pattern of a culture if one is to understand what seem to be surface differences between individuals of two cultures (Hall, 1959). Therefore, before proceeding to cross-cultural studies of particular traits or behaviors, we shall first consider two dominant modes of interpersonal relations characteristic of the two cultures in question.

Practically all domains of behavior of individuals of these two cultures can be attributed to two characteristics: the individualism of the Anglo-American and the personalism which characterizes Hispanic-Americans (Szalay et al., 1978). The Hispanic-American identifies himself most frequently in the context of group membership. In this context, he perceives behavior as being organized around larger group goals, and his focus is on those attributes and qualities which enhance group solidarity, such as loyalty and understanding (Szalay et al., 1978). In contrast, the Anglo-American sees the self as differentiated from others, and develops his social networks in accordance with this view (Szalay et al., 1978). The important goal for the Anglo-American is self-realization, with its components of self-knowledge, self-understanding, self-respect, and self-love (Szalay et al., 1978). In general, the Anglo-American behaves in accordance with internal guides and self aware-ness, in contrast to the Hispanic-American who views conscience in relationship to others (Szalay et al., 1978). As a result, the Anglo-American is not accustomed to viewing himself or evaluating his behavior with a larger social group as a reference point (Szalay et al., 1978).

The difference in orientation between Hispanic- and Anglo-Americans may be observed in several arenas. Individual competition is typical of Anglo-American children in school when compared to Mexican-American children (Ramirez and Castaneda, 1974). Anglo-American children characteristically work individually and are motivated to excell by exhortations such as "Do your best", whereas the Mexican-American child prefers to work with his friends, doing his best to help the group achieve a particular goal (Ramirez and Castaneda, 1974). The lack of response of the Mexican-American child to individual competition is often misinterpreted by Anglo-American teachers as laziness, lack of interest, or lack of ability (Ramirez and Castaneda, 1974). It is not clear whether such differences exist among adult Hispanic-Americans in Anglo-American dominated institutions; it is likely that highly acculturated Hispanic-Americans have adapted to the individualism inherent in motivation in Anglo institutions. Less acculturated Hispanics who view themselves as part of the larger social collectives may respond best to group motivation and cooperation, and may well perceive tasks assigned on the job as assigned to the group and needing the cooperation of the group rather than as strictly individual tasks. Such differences, if they exist, would be likely to strain interpersonal relations on the job and might interfere with integration into the work structure of an institution. However, the existence of these differences is speculation at this point. The questions of the most effective type of motivation, and response of Anglo-Americans when Hispanic-Americans fail to respond to individual motivation are ones which need further study.

Similar differences emerge in mental health care. Puerto Rican patients have been found to respond best to therapy which takes into account the entire family rather than only the individual. Mental health care is most often sought by Anglo-Americans for lack of personal fulfillment, whereas the Hispanic-

5

American seeks mental health care when his web of social structures is removed or ceases to function (Szalay et al., 1978). The importance of the web of social supports to the Hispanic-American suggests that integration into the social structure of his environment may hold special importance for him in a residential situation such as the Navy, and that lack of integration may result in mental strain which, in conjunction with other perceived negatives, could result in a decision to seek a more comfortable environment.

The group orientation of the Hispanic-American is often attributed to early socialization patterns in the home. Both Mexican-American and Puerto Rican children are brought up to identify with the family, an identification which lasts during the individual's entire life (Madsen, 1958; Ramirez and Castaneda, 1974; Ramirez and Price-Williams, 1976) and is consistent with personalism as a basic premise of Hispanic-American cultural organization. In contrast to the Anglo-American, the needs and interests of the individual remain secondary to those of the family (Hoffman, 1971; Leavitt, 1974; Madsen, 1958; Ramirez and Castaneda, 1974; Szalay, 1978). The ideal family life is seen as harmonious and unified (Szalay, 1978). Family unity and harmony imply patterns of individual behavior which are organized around larger group goals (Szalay, 1978), resulting in submersion of individual autonomy in favor of harmonious relations of the group. Accordingly, emphasis is placed on the individual's skill in relating to others and the development of sensitivity to the feelings and needs of others (Ramirez and Castaneda, 1974), rather than on individual expression and self-realization. As will be seen, the value placed on sensitivity towards others will extend to interpersonal relations outside the context of the family.

The personalism of the Hispanic-American and the individualism of the Anglo-American are related to the manner in which each views his social environment. The Hispanic-American places a great deal of importance on collectives

such as community and society, seeing them as forces which unite people and viewing themselves as an integral part (Szalay et al., 1978). The Anglo-American, in contrast, views the larger social units as a loose aggregate of people. He is somewhat skeptical of them and tends to see them as inhibiting to his own ends (Szalay et al., 1978). In line with this view, the Anglo-American sees authority as a function of people and their roles whereas the Hispanic-American sees the government, the institution, as the major source of authority (Szalay et al., 1978). This is consistent with Garza and Nelson's findings that Mexican-American college students focused more on the formal aspects of the college environment, i.e., the institution itself, than did Anglo college students (Garza and Nelson, 1973).

INTERPERSONAL RELATIONS IN JOB PERFORMANCE

A major issue in hiring in large companies and in recruiting for the military is the job performance of the person or group to be hired. When hiring members of a group of the same culture, employers use criteria that they feel indicate willingness and ability to perform well. However, some traits typical of members of a different culture may lead an employer to believe that they do not perform well or do not have the ability to perform well. Therefore, the issue of job performance of Hispanics requires examination, both to identify differences and to dispel myths.

Work itself is viewed differently by members of the two cultures. Anglo-Americans view the activity of work as central, seeming to value work for its own sake (Szalay et al., 1978). Hispanic-Americans, in contrast, view work as a necessary condition of life, a way of providing housing, food, and security. Consistent with their focus on the formal aspects of social institutions, they

7

focus more on the formal arrangement and setting in which work takes place than does the Anglo-American (Szalay et al., 1978). The individualistic Anglo sees achievement, success, and progress as a source of personal satisfaction whereas the Hispanic derives satisfaction from the recognition and positive feedback received as a result of achievement and success (Ramierez and Castaneda, 1974; Szalay et al., 1978). Szalay's findings may have ramifications for the type of supervision under which Hispanic-Americans prefer to work. It seems likely that Hispanic-Americans, consistent with their orientation toward expectations and recognition of others, are motivated by the supervisor's expectations. Mexican factory workers in Monterrey and Leon support this belief; they attributed hard work to expectations of others, chances for promotions, or more money, whereas Anglo-American factory workers believed that hard work is due to a feeling of responsibility to the company and co-workers (Reitz and Groff, 1973). If this finding is generalizable to Hispanics residing and working in the United States, it suggests increased responsibility for the supervisor for the production of the men working under him and perhaps a greater need to acknowledge their work. Managers in California and Texas of Mexican-Americans and non Mexican-Americans studied by Whitehead and King believed that Mexican-American workers require different supervisory techniques and standards of performance than other employees (Whitehead and King, 1973) However, they also reflected lower attitudes toward Mexican workers and expressed higher levels of dissatisfaction with their performance. Whitehead and King conclude that the Mexican-Americans' performance reflected the lowered expectations of their managers, and suggest that the low perceptions of the mostly white, middle-class managers are due in part to cultural differences. They suggest that a dual educational effort be directed towards both the managers and the workers to allow both to adjust to their work situation.

The lower expectations of Whitehead and King's managers are illustrative
of much of the literature which suggests that the ethnic culture of Mexican-
Americans adversely affects job performance. However, assessment of the job
performance of Mexican-American and non Mexican-American employees in San
Antonio in occupations of intermediate-level prestige does not support that
contention. There, the job performance of Mexican-American post office workers,
firemen, policemen, and department store workers, was found to equal or exceed
that of the Anglo-Americans studied (Weaver and Glenn, 1970). The Mexican-
American workers studied were found to perform better on written tests influenced
by native intelligence (Weaver and Glenn, 1970), suggesting that they may have
been held down from higher status occupations, but also possibly biasing the
results somewhat. The authors state that the data do not prove that there are
no detrimental effects from the traditional Mexican-American culture; however,
any considerable handicap should have been reflected in the data.

Low expectations and attitudes toward ethnically different persons are
not restricted to industry. There is strong evidence that foreign or low
prestige accents in English lead Anglo-Americans to associate the speaker with
lower intelligence, lack of trustworthiness, dishonesty, less ambition, etc.
(Carter, 1976). In light of the available evidence of unconscious Anglo-
American prejudice toward those with accented English, one may question the
extent to which this phenomenon occurs in the Navy. It was demonstrated above
that Mexican factory workers attribute hard work to others' expectations to a
greater degree than Anglo-American factory workers. It was also suggested
that the lower expectations held by managers of their Mexican-American workers
were reflected in lower performance levels (Whitehead and King, 1973). If
petty officers and officers have lower expectations and attitudes toward those
who speak accented English, this may result in lowered performance just as in

9

industry. One might also question the extent to which advancement is affected since an oral examination of subject matter is necessary before striking for a higher rating. Study of the effects of accented English on the satisfaction level of petty officers and officers is needed to determine whether there is a negative effect on the performance level of Hispanic-American sailors. Such an effect might impede the acceptance of Hispanic-Americans into the work structure of the Navy by effectively masking the actual performance potential of the individual. The issue of accented English may be expected to continue in the near future, as there is a high degree of language maintenance among Mexican-Americans of all ages which is continually reinforced by the influx of immigrants from Mexico (Skrabanek, 1970). This may suggest human relations training for supervisors of individuals with accented English to make them aware of Anglo-American prejudices and to help make allowances for them.

As we have seen, the attitudes and expectations of supervisors toward culturally different employees may be affected as much by interpersonal relationships as by actual performance. Both employees and their supervisors come to a situation with culturally derived expectations of the interactions that will take place. When the expectations are not similar, mental discomfort ensues (Hall, 1959) which may interfere with both job performance and the evaluation of the performance. Evidence suggests that Hispanic-Americans and Anglo-Americans hold different expectations of interpersonal relations, which may affect relationships on the job. The personalism and individualism characteristic of each group has been noted.

DISCIPLINE AND CONTROL

Differences also extend to amount of respect shown to the other person and the way in which it is shown. Mexican-American junior and senior high

10

school students view interpersonal relationships as the attempt of one person to control another (Ramirez, Taylor, and Peterson, 1971). As a result, they are sensitive to domination by others, a fact which may be potentially conducive to maladjustment in school (Ramirez et al., 1971). Puerto Ricans in New York show a similar concern for domination in dealings with other persons. They place high value on showing respect for one's friends and acquaintances, expressing deference to the other person in all encounters (Lauria, 1964), and on avoiding humiliation or losing one's dignity (Hoffman, 1971; Lauria, 1964). These concepts lead Hispanic-Americans to avoid being proven wrong (Madsen, 1958). If the preoccupation with saving face extends to Hispanic-Americans in the Navy, it may have implications for supervision. Anglo-Americans are generally direct with suggestions or corrections about one's work. In contrast, Puerto Ricans are more indirect, and Anglos unaccustomed to indirect corrections may miss the suggestion altogether. If the supervisor who criticizes work directly is perceived as trying to dominate or to humiliate the employee, misinterpretation may occur which may not be understood on the part of the supervisor. If the Hispanic-American supervisor corrects indirectly, it may not be understood as a correction by the Anglo-American employee. In addition, the relationship between military discipline and the concepts of dignity and honor described above is unclear. It seems reasonable to question whether discipline is viewed in the same way among Hispanic-Americans as among Anglo-Americans, and, based on the above, if similar types of verbal discipline have the same effect among members of each group.

ATTRIBUTION OF RESPONSIBILITY

Discipline may be subject to other differences. The existence of disclaimed activity, or verbalization serving to present the individual in a passive

11

position with respect to his actions, may be a manner of deflecting responsi-
bility for his actions elsewhere. One effect of disclaiming activity is to
deny the existence of a conscious, knowing actor, thereby removing one of the
essential components of an active orientation (Roll, Rabold, and McArdle,
1976). Disclaimed activity may be optimally studied through analysis of
dreams since there are no social consequences involved in claiming responsibility
(Roll et al., 1976). Using the analysis of dreams, Chicano students at the
University of New Mexico were found to exhibit significantly more disclaimed
acts than Anglo-American students, leading the researchers to conclude that
Chicanos tend to be more passive than Anglo-Americans in their style of coping
with the stresses and problems of life (Roll et al., 1976). Although college
students may not be representative of the general Chicano population, the
researchers suggest that since they may be among the most acculturated, pas-
sivity is likely to be present throughout the Chicano population. However,
Roll et al. caution that passivity generally has a negative connotation in
the Anglo-American culture, and that care must be taken not be interpret these
findings ethnocentrically. A second study explored the conditions under which
individuals are likely to be held responsible for an event. Anglo-American
junior high and college students were found to attribute greater personal
responsibility than did Blacks or Mexican-Americans for events with both
positive and negative outcomes, although all three groups attributed signifi-
cantly more responsibility to persons involved in events with negative outcomes
than to those involved in positive outcomes (Lipton and Garza, 1977). It is
possible that the subordinate status of Mexican-Americans and Blacks in the
United States lead them to be more sensitive to what constitutes acts of a
justified or unjustified nature, thus explaining the lower amount of attri-
bution in all instances (Lipton and Garza, 1977). An exception to the findings

above is that Mexican-Americans were more likely than either Anglo-Americans or Blacks to exhibit defensive attribution, that is, to attribute greater responsibility to the individual when the consequences of an accident were severe (Lipton and Garza, 1977). The researchers speculate that Mexican-Americans are more likely to believe that people get what they deserve and that, if a severe outcome befalls an individual, it was deserved (Lipton and Garza, 1977). These findings seem consistent with the findings that Mexican-American students were at least as internal, and in some cases, more internal than Anglo-American students, since internal control implies being responsible for one's actions, and by extension, for the negative outcomes which occur as a result of one's actions. The findings that Mexican-Americans were less likely to attribute responsibility for other conditions seems consistent with Reitz and Goff's findings that Mexican-American workers felt that workers who were incompetent or who made mistakes should continue to be employed and should be helped by the supervisor rather than punished for errors made.

LOCUS OF CONTROL

Locus of control theory would predict that individuals with an internal orientation would react less extremely to feedback than those with external locus of control (Garza and Lipton, 1978). Since entry activities into the Navy and all subsequent promotions involve learning new skills, ability to accept and profit by feedback would be expected to be requisite skills. Optimal instruction would also entail the instructor's understanding the reactions of his students to praise and criticism. Mexican-American undergraduates were found to differ from Anglo-American undergraduates in their reactions to praise and criticism (Garza and Lipton, 1978). Anglo-American

13

reactions were congruent with what would be predicted from locus of control theory, that is that externals devalued the experimenter more than internals. However, Mexican-American internals were found to devalue the experimenter's performance more than Mexican-American externals, leading the researchers to conclude that internality and externality may result in different behavior in members of different cultures (Garza and Lipton, 1978). It is possible that some Mexican-Americans exhibited defensive externality, or the intentional adoption of an external locus of control pattern as a means of evading responsibility for anticipated negative reinforcement (Garza and Lipton, 1978). The researchers speculate that the Mexican-American culture may foster a greater degree of defensive externality than does the Anglo-American culture, although there is as yet no data to substantiate this.

Traditional Mexican-American culture has often been blamed in the literature for the lack of social mobility and lower job performance of its adherents. One of its components, fatalism, is considered to inhibit upward mobility because its adherents see little or no connection between their action and the rewards which result. Hispanic-Americans have generally been characterized as fatalistic and passive (Hoffman, 1971; Leavitt, 1974; Madsen, 1958), believing that they possess little control over occurences in their lives. The passivity of the Hispanic-American is often contrasted somewhat negatively with the Anglo-American view of control over his fate and environment. Madsen (1958) states that what the Anglo tries to control, the Mexican-American tries to accept. Much of the evidence supporting this claim, however, is anecdotal, and those who make the claim generally do not specify whether it is true for the relatively acculturated as well as for the unacculturated, nor do they consider socio-economic status.

14

Fatalism may be tested empirically by means of Rotter's Internal-External Locus of Control Scale. Using Rotter's schema, those who perceive events as beyond their control, who believe that what happens to them results from luck, fate, or other persons or forces, may be characterized as believing in external control; those who believe that they control the events that happen to them, as believers in internal control. If fatalism and passivity are characteristic of the Hispanic-American population, then Hispanics would be expected to be more external in their locus of control than Anglos of similar socioeconomic status and education (Garza and Widlak, 1977). However, Mexican-American students at several universities exhibited the same degree of internality as Anglo-American students of similar socioeconomic status or were more internal (Cole, Rodriguez, and Cole, 1978; Garza and Ames, 1974; Garza and Widlak, 1977), thus contradicting claims of fatalism as a salient cultural belief held throughout the Mexican-American population. Factory workers in Mexico were significantly more external in beliefs in leadership and success than factory workers in the United States, and had their highest external score in beliefs of luck and fate. However, they did not differ from factory workers in the United States in beliefs concerning respect and politics (Reitz and Groff, 1974). Further study will need to determine if these findings are generalizable to other occupational groups or ages among the Mexican-American population. However, the empirical evidence available suggests that fatalism may not be uniformly characteristic of the Mexican or Mexican-American population and that the characterization of Hispanic-Americans as fatalistic should be employed with caution until further studies are conducted.

Further study of the Rotter Internal-External Locus of Control Scale reveals some cultural differences in the meaning attached to some items. Factor analysis of the results of the Rotter reveals five factors or components

of the locus of control score: luck, fate, and change; respect and world justice; political matters; academic fairness; power, leadership, and success. The luck/fate and leadership success factors can tentatively be regarded as culturally equivalent to members of both cultures (Garza and Widlak, 1977). However, the remaining three categories do not consistently convey the same meaning to Mexican-Americans and Anglo-Americans, a fact which may explain the contradictory findings sometimes cited for locus of control among Mexican-Americans (Garza and Widlak, 1977). Applying different meanings to some items of the Rotter may explain why similar locus of control scores are sometimes associated with different types of actions of Anglo-Americans and Mexican-Americans (Garza, personal observation). It seems, then, that locus of control data for the Hispanic-American population must be interpreted with some caution, with attention paid to its cross-cultural predictive validity.

TIME PERSPECTIVE

Other components of the traditional Hispanic-American culture have also been blamed for alleged low aspirations and performance among Hispanic-Americans. Hispanic-Americans have long been considered to possess a different time perspective than Anglo-Americans. Hispanic-Americans have been described as being present or past-oriented (Leavitt, 1974; Madsen, 1958), in contrast to middle-class Anglo-Americans who are considered to be future oriented in their planning, allowing them to understand the need for deferred gratification for future reward. The present/past orientation of Hispanic-Americans is considered to function as a barrier to aspirations for social mobility, because it impedes those who subscribe to it from making the necessary sacrifices for upward mobility and other rewards in the future. As with fatalism, however, the

16

claims are anecdotal and not well documented. The two studies of time perspective uncovered do not support this stereotypical notion. Anglo- and Mexican-American students at two south Texas universities were found to be similar in the extent of their projection into the future, the relative correspondence between the way in which they ordered events and their actual life cycle, and projecting negative events into the future (Khoury and Thurmond, 1978). As with other studies done with college students, it is not clear whether the results are typical for the the general population or specific to the students, since college students may be more highly acculturated or assimilated into the dominant Anglo-American population or may represent a more upwardly mobile segment of the population. Puerto Rican high school students in New York exhibited greater future orientation in English that in Spanish, and in domains in which members of their speech community had great control (Findling, 1971). The results above lead to speculation that if temporal differences do exist between Hispanic- and Anglo-Americans, among bicultural Hispanics who function in both Anglo and Hispanic domains, future-orientation may be exhibited in domains associated with being Anglo to a greater degree than in those associated with being Puerto Rican or Hispanic-American. Future studies are needed to document the temporal perspective of individuals at different stages of acculturation and assimilation in order to determine the pervasiveness of present time orientation, if it exists, and to determine whether it is a function of ethnicity, socioeconomic status, of degree of acculturation or assimilation. Study is also needed to determine in what way any time perspective found to be unique to Hispanic-Americans affects behavior or hinders job performance, education, or social mobility.

A second aspect of time orientation may differentiate between Anglo- and Hispanic-Americans, although evidence, as with present orientation and fatalism,

is anecdotal. The Anglo-American, consonant with the value he places on work as an activity, perceives time as something which should be planned, with future events fitted into his schedule (Hall, 1959). He reflects the value he places on time by specifying how long it takes to do everything and taking appointments and deadlines very seriously (Hall, 1959). Children are socialized to regard time as a commodity to be carefully planned from the time they are placed on a schedule for feeding and sleeping (Hall, 1959). In contrast, lower class Puerto Rican children, cared for by person-oriented rather than time-oriented mothers, eat and sleep when they express the need (Leavitt, 1974). Anglo-Americans further allot periods of time to a single activity (monochronism) and are frequently frustrated by the Latin Americans' polychronic use of time in which one individual works at several activities simultaneously (Hall, 1959). No data were uncovered on possible cross-cultural differences regarding how time is perceived and used among adults of the two cultures in question. However, differences in the manner in which time is regarded and used may lead to unnecessary misunderstandings among culturally different employees or members of the Navy and may profitably be investigated to determine if differences exist and possible ramifications for behavior.

DEVELOPING THE TURNER RETENTION/ATTRITION MODEL (TR/AM)

Although the populations of the Navy and institutions of higher education or industry are similar in some respects, studies of turnover conducted in each are not necessarily applicable to the Navy. Many of the studies in both higher education and industry have considered the relationship between turnover and only one factor, or have been post hoc studies. Although each type of study sheds light on the variables which may be associated with turnover, neither successfully explains the process of dropout, but instead describes it (Tinto, 1975). It is well known, for example, that socioeconomic status is related to completion of a degree in higher education, but the fact that the two are related does not yield a satisfactory explanation of the nature of the relationship. Further, a study of the relationship between a single variable and turnover lacks a larger context by eliminating the influence of other variables on turnover. Researchers in both higher education and industry advocate the development of models which can be tested longitudinally in the institution for which they were developed. The use of longitudinal studies allows identification of variables which may not be obvious in a post hoc study, or which may be related to turnover tangentially rather than as causal factors.

Studies conducted outside the Navy are quite useful in suggesting variables to consider in studying attrition in the Navy. However, by nature of the institutions they describe, they do not consider several variables which are unique to the Navy. Unlike most industry, the Navy is characterized by its residential nature, the physical separation of the individual from his family and friends, the mandatory training required by the Navy, and the contractual nature of the four-year enlistment. Institutions of higher education are generally characterized by the on-campus residence of their students, and

therefore, physical separation from their families and previous friends.
However, the populations of universities and the Navy differ in their past
educational achievement, and in the nature of the preparation for future
employment afforded by the university and the practical training and activities
experienced in the Navy.

A model to explain and predict attrition of Hispanics from the Navy would
need to consider several variables unique to the Navy. Since the Navy actively
competes for its recruits with other civilian activities, it seems likely that
variables external to the Navy influence a recruit's commitment to the Navy.
Therefore one would need to know what external variables are important and at
what stage, and the extent of that influence. It would also be important to
know the relative importance of external variables when compared to social and
work factors within the Navy. In some models of turnover in industry, the
process of weighing factors when considering whether to stay or leave is
called cost and benefit analysis. The weighing of external factors by sailors
in the Navy resembles the cost and benefit analysis considered to be conducted
by individuals working in industry. This then, allows the adaptation of portions
of models of turnover in industry to the problem of attrition from the Navy.

A model for attrition from the Navy would also need to consider whether
the family and educational background of the individual predispose the individual
to certain behaviors which affect his level of commitment. Although possession
of a high school diploma is not necessary for induction into the Navy, those
who have persevered through high school have been found more likely to complete
their term of enlistment in the Navy. It may be that, like college completion,
high school completion is an indication of successful integration into its
social and academic systems, and that individuals who have successfully inte-
grated into those systems once are more successful in subsequent integration

20

than those who did not. It also seems important to examine the attitudes of the family and peers toward the Navy, and to determine to what extent they influence the individual's commitment to the Navy. Where family ties are strong, as they are generally assumed to be among Hispanic-Americans, the physical separation from the family may play a part in the individual's decision to stay in or leave the Navy. The relative importance of that influence would need to be taken into account in a model of attrition.

Other background variables would also need to be included in the model to describe adequately the predisposition of the individual's levels of commitment and the subsequent interaction with the social and work systems. The individual's score on the Armed Services Vocational Aptitude Battery (ASVAB) claims to indicate his aptitude for advance training (Navy A Schools), apprenticeships, or on-the-job training. Since the ASVAB score is a determining factor in each individual's level of employment within the Navy, it is likely to be related to the individual's level of status in the eyes of his Navy peers. One would hypothesize that the level of status that each individual perceives himself to have would affect his sense of commitment to the Navy and to completing his term of enlistment.

An implicit assumption of models of dropouts in higher education and of the models of labor turnover is that the population with which they are concerned is of the same cultural background as that projected by the institution. The author uncovered few studies of a cultural or ethnic minority working or studying in an institution dominated by the cultural majority. However, prediction of attrition of cultural minorities from the U.S. Navy may be partially dependent on the degree to which the individual who is a member of the cultural minority holds values compatible with those of the representatives of the institution. The individual's level of commitment would be influenced

21

by the degree of congruency of the meaning and importance attached to events by members of each culture, and the degree to which commitment itself is a function of similar factors for those of each culture. As a background variable, culture here refers to the values and beliefs held by the individual when he enters the Navy. Culture will be implicit throughout the model, since each individual may be looked upon as a product of his culture, which may temper his perception of intergration into the social and work systems. Along with knowing the cultural background of the individual, the degree to which the individual is acculturated or assimilated into the majority culture would affect his integration into the two systems, hence, indirectly, his commitment.

Finally, understanding the phenomenon of leaving the Navy may be partially dependent on why an individual joined the Navy. Early commitment to the institution and to completing the enlistment may be influenced by the individual's reasons for joining, his expectations, and attitudes toward the Navy upon joining. If the individual's expectations are realistic from the onset, if his motivations for joining lead to expectations that the institution can meet, one can hypothesize that attitudes toward the Navy will positively influence the level of commitment at the onset. However, if one's motivation to join involves expectations which will not be met, or if expectations are negative, initial level of commitment may be low, thus negatively influencing social and work integration. In the case of culturally different recruits, it will be necessary to know to what degree motivation to join and initial expectations are congruent with those of Anglo recruits and whether they influence initial commitment in the same way for both groups.

THE TURNER RETENTION/ATTRITION MODEL (TR/AM)

The model, which can be seen in figure 1, views attrition decisions as a longitudinal process of interaction of the individual, the social and work systems of the Navy, and external factors outside the Navy. It differs from a screening chart by which recruits are admitted in that in order to explain the decision to stay in or leave the Navy, it studies the interaction over time of the background variables with which an individual enters the Navy and the effects of his experiences in the Navy. Previous studies have investigated the relationship of many variables and completion of the term of enlistment. A drawback of such studies is that the association of a certain variable with withdrawal from the organization does not explain why this variable is related to withdrawal nor in what way it relates to organizational experiences to cause withdrawal. The longitudinal character of this model permits study of the nature of the interaction among various elements and will assist in the identification of how various variables result in attrition decisions. Such identification will assist the Navy in the formulation of personnel policies to alleviate attrition of Hispanics.

The model posits that decisions to remain in or leave the Navy are the result of the interaction of background characteristics with which a recruit enters the Navy and a series of variables determined by his experiences in the Navy. Reduced to the most basic, it suggests that the decision to stay in or leave the Navy is dependant on the commitment of the individual to the Navy and to completing his term of enlistment, which in turn are continually affected by the interaction of background variables, the reasons for joining, expectations, and experiences in the Navy. Navy experiences are viewed as either social or occupational, and remaining in the Navy is seen as related to the degree of normative and structural integration in each.

FIGURE 1
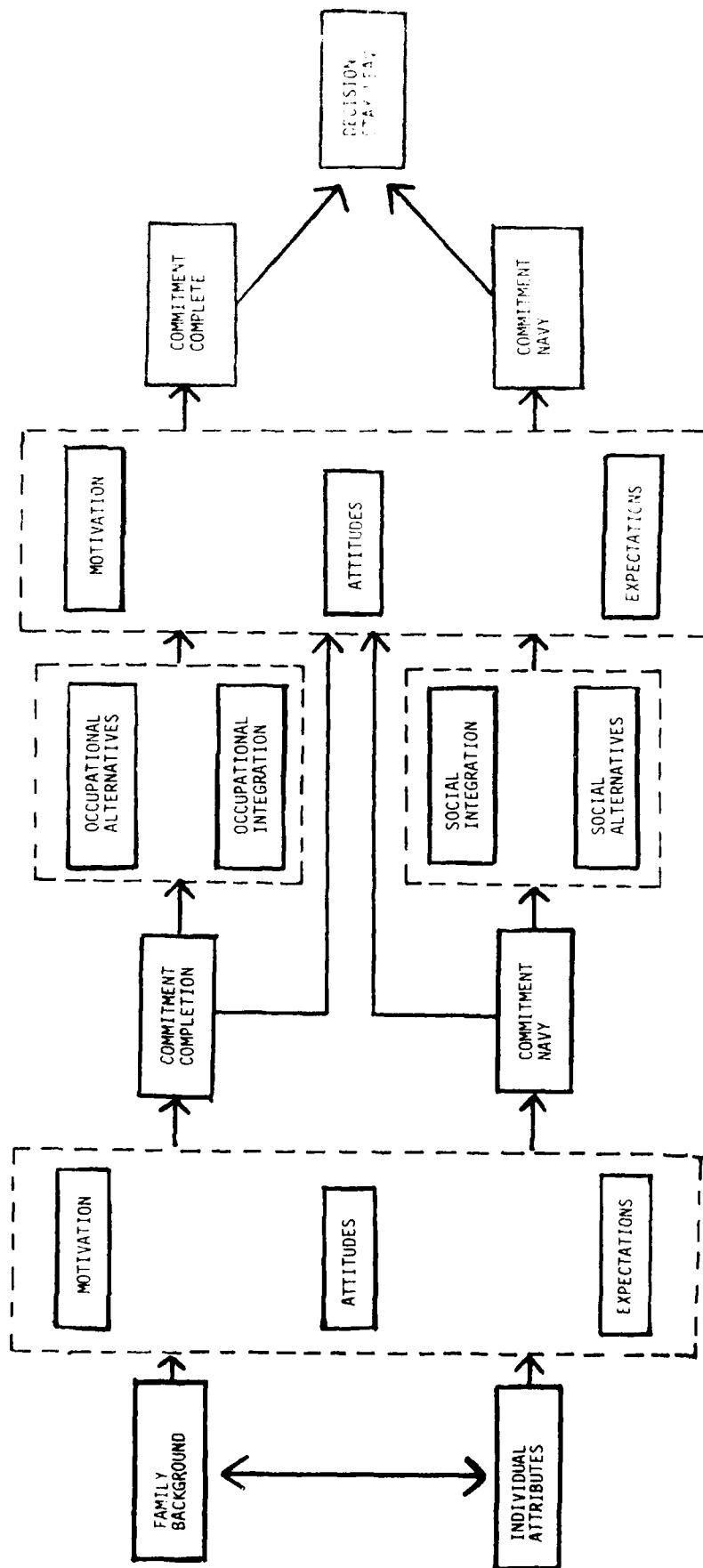
Each recruit enters the Navy with certain attributes (ability, viewed here as the individual's score on the Armed Services Vocational Aptitude Battery or ASVAB; race or ethnic group; view of his degree of control over his environment; and the degree to which his beliefs approximate those of the majority Anglo-American culture), family background (socioeconomic status; expectational climates; cultural heritage), and experiences (educational and social attainments). The background of the individual shapes his particular adjustment to the Navy directly or indirectly. The ASVAB score and previous education determine whether an individual attends a Navy A school, an apprenticeship program, or goes directly on duty. This in turn affects his career opportunities for the duration of his term in the Navy.

Other attributes affect the adjustment of the individual to the Navy more subtly. His reasons for joining, expectations, and attitudes toward the Navy are partially shaped by his culturally derived beliefs and attitudes. Rather than the quality of the initial expectations of each recruit, it is the degree to which the individual feels that his expectations have been fulfilled that will have an important influence on his commitment to the Navy and to completing his enlistment. As with the reasons for joining and the expectations and attitudes toward the Navy, the degree to which expectations have been fulfilled will also be shaped by culturally derived beliefs and attitudes, and may be quite different among Hispanic-Americans than among Anglo-Americans. Socioeconomic political context affects a recruit's motivation for joining and his expectations of the Navy. In times of national crisis, one would expect that recruits would be motivated by patriotism to a greater degree than in the absence of crises.

The expectations a recruit holds for the Navy depend on his family background and his past experiences, as well as on his cultural values and beliefs.

If a value has greater salience for members of a particular culture, although both groups may hold it as a value in their occupation, it may have greater importance for the group for which it is more salient. Therefore if that expectation is not met, it is likely to have a greater effect on commitment for that group than for the other. Motivation for joining as well as the expectation of how long one will remain in the Navy and away from his family, may be different for members of different cultural groups also.

As may be seen in figure 1, the individual's background characteristics and feelings upon entering the Navy affect his commitment to the institution and to completing his term of enlistment, which in turn affect the nature and quality of experiences the individual will have in the Navy. However, as will be seen, high initial commitment does not automatically ensure high integration into the occupational and social systems, although the relationship between low commitment and low integration is more likely to be linear.

High initial commitment would seemingly positively predispose an individual toward the Navy. The positively predisposed sailor is likely to be most negatively affected if a high degree of integration into the social and occupational systems does not occur. A culturally different sailor may hold job values which are not presently met by the majority-oriented Navy and which will result in disappointment and finally in low commitment. Similarly, because of culturally different expectations of supervision, the manner in which a job should be performed, or congruency of beliefs concerning the degree of initiative one is expected to show, a culturally different sailor may behave differently from a majority sailor. If his different behavior is perceived negatively by his coworkers and superiors, integration into the social and occupational systems may not occur as he wants and expects, and his initial positive predisposition may be blunted. The interaction between his high initial feelings and

the subsequent low integration into the occupational and social systems then result in an altered, lower sense of commitment to the institution and possibly to completing his term of enlistment. The case described above would affect differently the performance of those who feel that they have a high degree of control over their environment and those who do not (Rotter's high internals and high externals). High internals (those who feel that they control their environment) have been found to vary less in their performance despite low evaluations because they are less dependent on the evaluations of others for a sense of their own worth. In contrast, high externals can be expected to perform consistently with the expectations and evaluations of coworkers and superiors, and are therefore more likely to be affected by negative perceptions of superiors.

It is important to note that initial feelings, degree of commitment, and degree of integration into the two systems are measured by the individual's feelings rather than external criteria. The decision to stay or leave is dependent on the subjective feelings of each individual. It is possible that an individual may seem integrated to the outside observer, but may not be as well integrated as he expected upon entry or as well as his own values lead him to expect. The effect upon the individual, then, is negative, although a worker or superior may consider him to be performing well and to be highly integrated. As noted above, the effect of this lack of congruency is likely to be more severe for the high external than for the high internal.

In order to be fully integrated into the occupational system, a sailor must be incorporated structurally and normatively. Structural integration is measured by promotions and performance evaluations; the sailor who receives good evaluations and is promoted at a rapid rate is considered to be highly structurally integrated. Normative integration may be measured by the amount

of encouragement or disparagement by the supervisor and the degree of acceptance on the job by coworkers. High occupational integration, then, is a function of high normative and high structural integration. However, an individual may or may not exhibit the same degree of structural and normative integration in the occupational system. A culturally different sailor who receives poor evaluations, whether for poor performance or for differences in the manner of performance, is not highly structurally integrated. However, he may be appreciated by his coworkers...and thus highly normatively integrated. Conversely, it is possible, although less likely, that a sailor who has been promoted rapidly may not be accepted by his coworkers and is therefore well integrated structurally but not normatively. Different individuals, particularly those with different cultural backgrounds, may have different values as to the degree of integration expected in each sphere. Therefore, while one sailor is satisfied to be highly structurally integrated but only moderately integrated normatively, another may be disappointed. Therefore, the interaction between occupational integration and subsequent feelings is dependent on individual values and expectations.

Integration into the social system of the Navy is also characterized by structural and normative integration. Structural integration is indicated by the amount of participation in Navy sponsored services or activities, such as recreational activities, medical services, and the like. Normative integration consists of informal contacts with peers and the amount of satisfaction with friendships formed with other sailors. The degree of social integration, just as the degree of occupational integration, is measured by the feelings of the individual. While some individuals require a strong social support system of close friends, others may be satisfied with more superficial associations. Hispanic-Americans are often characterized as dependant on strong friendship

ties; therefore, what may be satisfactory to many Anglo-Americans may be inadequate to many Hispanic-Americans. Social integration may also be affected by external reactions. Family responsibilities and peer reactions may color the attitudes of the sailor, especially one who is highly external in his perceived locus of control, and may either enhance or diminish the degree of social integration. Just as with occupational integration, structural and normative integration, into the social system may be independent of each other. A minority sailor, especially, may be well integrated among other minority sailors but poorly structurally integrated. The individual who is well integrated normatively among other minority sailors may be content with that situation, although he is not well integrated structurally.

Both social and occupational integration are affected by alternatives outside the Navy. The issues of low pay within the military, amount of civilian unemployment, possible discrimination against culturally different groups in civilian jobs, as well as family responsibilities and peer reactions will affect the degree of integration into the occupational and social systems by affecting the degree of commitment the sailor feels toward the Navy and toward completing his term of enlistment. It is hypothesized that each sailor weighs the costs and benefits of remaining in the Navy, whether conciously or unconciously, by considering the civilian and social alternatives and the degree of satisfaction he feels with his occupational and social situation. This continually interacts with motivation to continue in the Navy, attitudes toward the Navy, and future expectations, as well as the degree to which previous expectations have been met. Where expectations were initially high but occupational or social integration are low, future expectations are likely to be revised downward, which will in turn affect attitudes and future motivation to continue. Conversely, where little was expected but the individual feels fulfilled to a

higher degree than expected, future feelings are likely to be revised positively. The continual revision of feelings will affect both commitment to the institution and to completing the enlistment, which will finally result in a decision to stay in the Navy or to leave.

SUMMARY

The model for attrition of Hispanic-Americans from the Navy is an interactional, longitudinal model. It posits that the decision to leave or stay in the Navy is determined by the interaction of the background characteristics of the individual, his feelings about the Navy at the time of enlistment, his commitment to the Navy, and his degree of integration into the occupational and social systems of the Navy. Each of these variables continually interacts with the others until the sailor completes his term of enlistment or leaves the Navy. The fulfillment of expectations and the degree of normative and structural integration into both the social and occupational systems of the Navy are important determinants of the decision to stay or leave because they have strong influence on strength of commitment to the Navy and to completing the term of enlistment. The degree to which the individual is integrated into the social and occupational systems, as well as the degree to which his expectations are fulfilled, is dependent on the perceptions of the individual rather than on objective criteria, because the decision to stay or leave is made by the individual based on his perceptions of his experiences.

FUTURE RECOMMENDATIONS

Development of the TR/AM uncovered several areas in which either research or data was lacking. It became apparent during the course of discussions with

30

Navy personnel concerning recruitment and attrition that identification of sailors of minority ethnic origins is somewhat haphazard. The system used at present is self-identification at the time of enlistment; however, some recruiters complete the item without consulting the recruit, and some recruits are reluctant to be identified with an ethnic group that they believe, correctly or not, might impede their Navy career. Therefore, no data on the actual rate of attrition of Hispanic-American sailors was uncovered, and it is unclear whether they leave the Navy before completing the term of enlistment at a higher or lower rate than Anglo-American sailors. Furthermore, existing studies of attrition cannot be reanalyzed to yield data on ethnic minorities within the Navy because the ethnic indicator on the Enlisted Master Tape is not always accurate. Therefore, a recommendation of this study is that the Navy develop a definition of a Hispanic-American sailor and that future recruits be identified according to this definition for the purposes of studies of attrition, retention, advancement, and the like. Existing civilian definitions of ethnic minorities use criteria such as first language spoken, language spoken by the parents, surname, and self-identification. There are identification problems associated with each. Therefore it is suggested that the Navy consider existing civilian definitions and their ramifications in order to determine which most closely meets Navy needs.

A second recommendation is that data from existing Selection Retention: Longitudinal Analysis (SERLAN) study conducted by NPRDC, be reanalyzed by ethnic indicator to determine the degree to which the Hispanic-Americans included in the sample approximate the Anglo-Americans in job values, motivation for joining, expectations, and attitudes toward the Navy, and that this data be analyzed in terms of attrition of each group. This data will indicate the degree to which Hispanic-Americans in the Navy approximate Anglo-Americans in

31

their expectations of the Navy and the benefits which they expect to gain from serving in the Navy, as well as the degree to which expectations of the Navy have been satisfied during the individual's enlistment, and the strength of his commitment to the Navy over the period of the study. The Navy will thereby have a clearer idea of the type of Hispanic-American it has attracted in the past. If the majority are Hispanic-Americans who have assimilated into the mainstream Anglo-American culture, it may indicate that recruitment will need to be pitched to less acculturated Hispanics, or that certain personnel policies may need alterations to retain them. Since little is known about the relative acculturation/ assimilation of Hispanics who join and remain in the Navy, analysis of existing data would allow the Navy to define the existing population and the population which would be available if certain changes were effected.

Several specific studies are hereby suggested as being of benefit to the Navy in identifying factors associated with the attrition of Hispanic-Americans from the Navy and in revising either recruiting or personnel policies to retain a greater percentage of Hispanic sailors.

1. In order to examine the results of supervisory techniques, congruency of expectations held by Anglo-American and Hispanic-American supervisors and sailors with regard to the amount and quality of feedback expected from work performed, the amount and specificity of direction expected, the maner in which work is to be performed (cooperatively or individually), and of Navy discipline procedures, it is suggested that an ethnography be conducted of an Hispanic-American sailor while on duty. This will provide information on the nature of interaction among coworkers and supervisors in the work domain, and will assist in identification of possible factors which may deter Hispanic-American sailors from either completing their enlistment or from reenlisting. Factors identified as possibly influencing such decisions can then be examined in a wider study of Hispanic-American sailors throughout the Navy.

2. Little is known about the attitudes of Hispanic-American families toward the Navy and the separation entailed by enlistment, or about the influence of these attitudes on the individual. Hispanic-Americans have been characterized by close family ties and interdependence; therefore, it may be that family attitudes have greater salience for Hispanic-American sailors than for Anglo-Americans. It is suggested that interviews be conducted with the families of new Hispanic-American recruits, enlisted men, and with Hispanic-Americans who were recruited but did not enlist in order to determine the influence of family attitudes on their decisions. The study should examine attitudes toward separation from the family, leaving what may be a predominantly Hispanic environment, the length of time a recruit is expected by the family to remain in the Navy, the conditions under which he will leave the Navy to help the family, the effects of Navy duty on marriage, and the type of responsibility felt toward the family. The results of this study will indicate the length of time Hispanics expect to remain in the Navy, reasons why Hispanics may or may not join, strategies for recruiting Hispanics, and reasons for leave which may be considered necessary by Hispanics but not allowed by the Navy.

3. The present study has found it necessary to include all Hispanic-Americans as one ethnic group. However, there is no empirical evidence that Puerto Ricans, Mexican-Americans, Cubans, and other Latin Americans in the Navy hold the same values, expectations of the Navy, or face the same problems once in the Navy. It is suggested that members of these groups be matched for socio-economic status, education, length of time in the United States, sex, and occupational status, and then interviewed with respect to the variables identified above. It is possible that existing data such as the SERLAN project conducted by NPRDC may be analyzed in terms of each separate group to yeild the information.

4.   As stated earlier, little is known about the actual attrition rate of
Hispanic-Americans from the Navy.   Information on attrition is available on
the Enlisted Master Tape.   It is suggested that analysis be conducted for a
sample of Hispanic-American and Anglo-American sailors to identify the length
of time they served, and ethnic/racial designator. This will have the effect
of determining if the small percentage of Hispanic-Americans presently serving
in the Navy is due to low induction rates, high attrition, or both.

Research on the question of Hispanic-American participation in the U.S.
Navy is just beginning.   It is suggested that one avenue of inquiry into the
present low participation rate is through examination of the feelings and
experiences of individual Hispanics who have chosen to join and have success-
fully passed the entry requirements and with families of elegible Hispanics.
The projects suggested here reflect that philosophy of inquiry.   However,
other avenues of inquiry at the institutional level, such as examining entrance
requirements, disciplinary procedures, rates of promotion, and the like,
should not be ruled out as contributing to the knowledge necessary to success-
fully incorporate qualified Hispanic-Americans into the Navy.

REFERENCES

Brislin, R., Lonner, W., & Thorndike, R. Cross-cultural research methods. New York: John Wiley and Sons, 1973.

Browning, H. L., Lopreato, S. C., & Poston, Jr., D. L. Income and veteran status; Variations among Mexican Americans, Blacks, and Anglos. American Sociological Review, 1973, 38, 74-85.

Carter, R. B. A study of attitudes; Mexican-American and Anglo-American elementary teachers' judgements of Mexican-American bilingual children's speech. (Doctoral dissertation, University of Houston, 1976) University Microfilm 77-1502.

Chandler, C. R. Value orientations among Mexican Americans in a southwestern city. Sociology and Social Research, 1974, 58 No 3, 262-271.

Cole, D., Ridriguez, J., and Cole, S. Locus of control in Mexicans and Chicanos: The case of the missing fatalist. Journal of Consulting and Clinical Psychology, 1978, 46 N. 6, 1323-1329.

Del Castillo, R. Reactions of bilingual and monolingual speakers to accented and non-accented speech. (Doctoral dissertation, Adelphia University, 1975) University Microfilms No. 76-1417.

Findling, J. Bilingual need affiliation and future orientation in extra-group and intra-group domains. In J. A. Fishman, R. L. Cooper & R. Ma. et al. (Eds.), Bilingualism in the barrio. Bloomington; Indiana University, 1971.

Fishman, J. A., Cooper, R. L., & Ma, R., et al. Bilingualism in the Barrio. Bloomington: Indiana University, 1971.

Fitzpatrick, J. P. Intermarriage of Puerto Ricans in New York City. American Journal of Sociology, 1966, 71, 395-406.

Garza, R. T. Affective and associative qualities in the learning styles of Chicanos and Anglos. Psychology in the Schools, 1978, 15, 111-115.

Garza, R. T. & Ames, Jr., R. A comparison of Anglo- and Mexican-American college students on locus of control. Journal of Consulting and Clinical Psychology, 1974, 42, 6, 919.

Garza, R. T. & Lipton, J. P. Culture, personality, and reactions to praise and criticism. Journal of Personality, 1978, 46, 743-761.

Garza, R. T. & Nelson, D. B. A comparison of Mexican- and Anglo-American perceptions of the university environment. Journal of College Student Personnel, 1973, 14, 5, 399-401.

Garza, R. T. & Widlak, F. W. The validity of locus of control dimensions for Chicano populations. Journal of Personality Assessment, 1977, 41, 6, 635-643.

Glazer, N. & Moynihan, D. P. Beyond the Melting Pot. Cambridge: MIT Press, 1963.

Hall, E. T. The Silent Language. Greenwich, Conn.: Fawcett Publications, Inc., 1959.

Hernandez, J., Estrada, L., and Alvirez, D. Census data and the problem of conceptually defining the Mexican American population. Social Science Quarterly, 1973, 53, 4, 671-687.

Hoffman, G. Puerto Ricans in New York: A language-related ethnographic summary. In J. A. Fishman, R. L. Cooper, & R. Ma. Bilingualism in the Barrio. Bloomington: Indiana University, 1971.

Hoffman, G. Life in the neighborhood: A factor analytic study of Puerto Rican males. In J. A. Fishman, R. L. Cooper, & R. Ma. Bilingualism in the Barrio. Bloomington: Indiana University, 1971.

It's Your Turn in the Sun. Time, October 16, 1978, 112, 48-52.

Kuvlesky, W. P. & Patella, V. M. Degree of ethnicity and aspirations for upward social mobility among Mexican American youth. Journal of Vocational Behavior, 1971, 1, 231-244.

Landau, S., & Farkas, A. Selection retention: A longitudinal analyses: I. Factors related to recruit training attrition. San Diego: Navy Personnel Research and Development Center, 1978. Report No. NPRDC TR 79-5.

Lauria, A., Jr. "Respeto," "relajo" and inter-personal relations in Puerto Rico. Anthropological Quarterly, 1964, 37, 2, 53-67.

Lawrence Johnson & Associates, Inc. A Study of the Spanish-Ethnic soldier Attitudes, Problems, Needs. Presidio de Monterey: Army Research Institute, 1979.

Leavitt, R. R. The Puerto Rican's Culture Change and Language Deviance. Tucson: The University of Arizona Press, 1974.

Lipton, J. P. & Garza, R. T. Responsibility attribution among Mexican-American, Black, and Anglo adolescents and adults. Journal of Cross-Cultural Psychology, 1977, 8, 3, 259-272.

Madsen, W. Mexican-Americans of South Texas. New York: Holt, Rinehart, and Winston, 1958.

Miller, M. V. Mexican Americans, Chicanos, and others: Ethnic self-identification and selected social attributes of rural Texas youth. Rural Sociology, 1976, 41, 2, 234-247.

Mittelbach, F. G., Moore, J. W. Ethnic endogamy - the case of Mexican Americans. American Journal of Sociology, 1968, 74, 50-62.

Moll, L. C. Bilingual and cross-cultural referential communication. (Doctoral dissertation, University of California at Los Angeles, 1978). University Microfilm No. 7820262.

Patella, V. & Kuvlesky, W. P. Situational variation in language patterns of Mexican-American boys and girls. Social Science Quarterly, 1973, 53, 4, 855-864.

Ramirez, M., III & Castaneda A. Cultural Democracy, Bicognitive Development, and Education. New York: Academic Press, 1974.

Ramirez, M., III & Price-Williams, D. R. Achievement motivation in children of three ethnic groups in the United States. Journal of Cross-Cultural Psychology, 1976, 7, 1, 49-60.

Ramirez, M., III, Taylor, C., Jr., & Petersen, B. Mexican-American ucltural membership and adjustment to school. Developmental Psychology, 1971, 4, 2, 141-148.

Reitz, H. J. & Groff, G. K. Economic development and belief in locus of control among factory workers in four countries. Journal of Cross-Cultural Psychology, 1974, 5, 3, 344-355.

Roll, S., Rabold, K., & McArdle, L. Disclaimed Activity in dreams of Chicanos and Anglos. Journal of Cross-Cultural Psychology, 1976, 7, 3, 335-345.

Sanders, M., Scholz, J. P., & Kagan, S. Three social motives and field independence-dependence in Anglo-American and Mexican-American children. Journal of Cross-Cultural Psychology, 1976, 7, 4, 452-461.

Skrabanek, R. L. Language maintenance among Mexican-Americans. International Journal of Comparative Sociology, 1970, 11, 4, 65-69.

Stoddard, E. R. The adjustment of Mexican-American barrio families to forced housing relocation. Social Science Quarterly, 1973, 53, 4, 749-759.

Szalay, L., Ruiz, P., Strohl, J., Lopez, R., & Turbyville, L. The Hispanic-American Cultural Frame of Reference. Institute of Comparative Social and Cultural Studies, Inc., 1978.

Teske, R. H. C., Jr., & Nelson, B. An analysis of differential assimilation rates among middle-class Mexican-Americans. Sociological Quarterly, 1976, 17, 2, 218-235.

Teske, R. H. C., Jr., & Nelson, B. H. Acculturation and assimilation: A clarification. American Ethnologist.

Tinto, Vincent. Dropout from higher education: A theoretical synthesis of recent research. Review of Educational Research, 1975, 45, 1, 89-125.

Tumin, M. & Feldman, A. The Puerto Rican View of Social Class. In Fernandez Mendez, E. (Ed.) Portrait of a Society; Readings on Puerto Rican Sociology. San Juan: University of Puerto Rico Press, 1972.

Weaver, C. N. & Glenn, N. D. The job performance of Mexican-Americans. Sociology and Social Research, 1970, 54, 4, 477-494.

Whitehead, C. J. & King, A. S. Differences in Managers' attitudes toward
    Mexican- and non-Mexican-Americans on organizational authority relations.
    Social Science Quarterly, 1973, 53, 4, 760-771.

Zirkel, P. Self-concept and "disadvantage" of ethnic group membership
    and "mixture". Review of Educational Research, 1971, 41, 3, 211-225.

Zirkel, P. Self-concept and ethnic group membership among public school
    students. American Education Research Journal, 1971, 41, 2, 253-265.

LIST 1
MANDATORY

Defense Documentation Center   (12 copies)
ATTN: DDC-TC
Accessions Division
Cameron Station
Alexandria, VA   22314

Library of Congress
Science and Technology Division
Washington, DC   20540

Chief of Naval Research   (3 copies)
Office of Naval Research
Code 452
800 N. Quincy Street
Arlington, VA   22217

Commanding Officer   (6 copies)
Naval Research Laboratory
Code 2627
Washington, DC   20375

LIST 2
ONR FIELD

Commanding Officer
ONR Branch Office
1030 E. Green Street
Pasadena, CA 91106

Psychologist
ONR Branch Office
1030 E. Green Street
Pasadena, CA 91106

Commanding Officer
ONR Branch Office
536 S. Clark Street
Chicago, IL 60605

Psychologist
ONR Branch Office
536 S. Clark Street
Chicago, IL 60605

Commanding Officer
ONR Branch Office
Bldg. 114, Section D
666 Summer Street
Boston, MA 02210

Psychologist
ONR Branch Office
Bldg. 114, Section D
666 Summer Street
Boston, MA 02210

Office of Naval Research
Director, Technology Programs
Code 200
800 N. Quincy Street
Arlington, VA 22217

LIST 3
OPNAV

Deputy Chief of Naval Operations
    (Manpower, Personnel, and Training)
Scientific Advisor to DCNO (Op-01T)
2705 Arlington Annex
Washington, DC   20350

Deputy Chief of Naval Operations
    (Manpower, Personnel, and Training)
Director, Human Resource Management
    Division (Op-15)
Department of the Navy
Washington, DC   20350

Deputy Chief of Naval Operations
    (Manpower, Personnel, and Training)
Head, Research, Development, and
    Studies Branch (Op-102)
1812 Arlington Annex
Washington, DC   20350

Deputy Chief of Naval Operations
    (Manpower, Personnel, and Training)
Director, Human Resource Management
    Plans and Policy Branch (Op-150)
Department of the Navy
Washington, DC   20350

Chief of Naval Operations
Head, Manpower, Personnel, Training
    and Reserves Team (Op-964D)
The Pentagon, 4A578
Washington, DC 20350

Chief of Naval Operations
Assistant, Personnel Logistics
    Planning (Op-987P10)
The Pentagon, 5D772
Washington, DC   20350

LIST 4
NAVMAT & NPRDC

NAVMAT

Program Administrator for Manpower,
   Personnel, and Training
HQ Naval Material Command (Code 08D22)
678 Crystal Plaza #5
Washington, DC   20370

Naval Material Command
Management Training Center
NMAT 09M32
Jefferson Plaza, Bldg #2, Rm 150
1421 Jefferson Davis Highway
Arlington, VA   20360

NPRDC

Commanding Officer   (5 Copies)
Naval Personnel R&D Center
San Diego, CA   92152

Navy Personnel R&D Center
Washington Liaison Office
Building 200, 2N
Washington Navy Yard
Washington, DC   20374

LIST 6   -
NAVAL POSTGRADUATE SCHOOL

Naval Postgraduate School
ATTN: Dr. Richard S. Elster
Department of Administrative Sciences
Monterey, CA 93940

Naval Postgraduate School
ATTN: Professor John Senger
Operations Research and
  Administrative Science
Monterey, CA 93940

Superintendent
Naval Postgraduate School
Code 1424
Monterey, CA 93940

LIST 7
HRM

Officer in Charge
Human Resource Management Detachment
Naval Air Station
Alameda, CA 94591

Officer in Charge
Human Resource Management Detachment
Naval Submarine Base New London
P.O. Box 81
Groton, CT 06340

Officer in Charge
Human Resource Management Division
Naval Air Station
Mayport, FL 32228

Commanding Officer
Human Resource Management Center
Pearl Harbor, HI 96860

Commander in Chief
Human Resource Management Division
U.S. Pacific Fleet
Pearl Harbor, HI 96860

Officer in Charge
Human Resource Management Detachment
Naval Base
Charleston, SC 29408

Commanding Officer
~~Human Resource Management School~~
Naval Air Station Memphis
Millington, TN 38054

Human Resource Management School
Naval Air Station Memphis (96)
Millington, TN 38054

Commanding Officer
Human Resource Management Center
1300 Wilson Boulevard
Arlington, VA   22209

Commanding Officer
Human Resource Management Center
5621-23 Tidewater Drive
Norfolk, VA   23511

Commander in Chief
Human Resource Management Division
U.S. Atlantic Fleet
Norfolk, VA   23511

Officer in Charge
Human Resource Management Detachment
Naval Air Station Ehidbey Island
Oak Harbor, WA   98278

Commanding Officer
Human Resource Management Center
Box 23
FPO New York   09510

Commander in Chief
Human Resource Management Division
U.S. Naval Force Europe
FPO New York   09510

Officer in Charge
Human Resource Management Detachment
Box 60
FPO San Francisco   96651

Officer in Charge
Human Resource Management Detachment
COMNAVFORJAPAN
FPO Seattle   98762

LIST 8
NAVY MISCELLANEOUS

Naval Military Personnel Command   (2 copies)
HRM Department (NMPC-6)
Washington, DC   20350

Naval Training Analysis
  and Evaluation Group
Orlando, FL   32813

Commanding Officer
Naval Training Equipment Center
Orlando, FL   32813

Chief of Naval Education
  and Training (N-5)
ACOS Research and Program
  Development
Naval Air Station
Pensacola, FL   32508

Naval War College
Management Department
Newport, RI   02940

LCDR Hardy L. Merritt
Naval Reserve Readiness Command
Region 7 Naval Base
Charleston, SC   29408

Chief of Naval Technical Training
ATTN: Dr. Norman Kerr, Code 0161
NAS Memphis (75)
Millington, TN 38054

Navy Recruiting Command
Head, Research and Analysis Branch
Code 434, Room 8001
801 North Randolph Street
Arlington, VA   22203

CAPT Richard L. Martin, U.S.N.
Prospective Commanding Officer
USS Carl Vinson (CVN-70)
Newsport News Shipbuilding &
  Drydock Company
Newsport News, VA   23607

LIST 8
NAVY MISCELLANEOUS

Naval Military Personnel Command   (2 copies)
HRM Department (NMPC-6)
Washington, DC   20350

Naval Training Analysis
  and Evaluation Group
Orlando, FL   32813

Commanding Officer
Naval Training Equipment Center
Orlando, FL   32813

Chief of Naval Education
  and Training (N-5)
ACOS Research and Program
  Development
Naval Air Station
Pensacola, FL   32508

Naval War College
Management Department
Newport, RI   02940

LCDR Hardy L. Merritt
Naval Reserve Readiness Command
Region 7 Naval Base
Charleston, SC   29408

Chief of Naval Technical Training
ATTN: Dr. Norman Kerr, Code 0161
NAS Memphis (75)
Millington, TN   38054

Navy Recruiting Command
Head, Research and Analysis Branch
Code 434, Room 8001
801 North Randolph Street
Arlington, VA   22203

CAPT Richard L. Martin, U.S.N.
Prospective Commanding Officer
USS Carl Vinson (CVN-70)
Newsport News Shipbuilding &
  Drydock Company
Newsport News, VA   23607

LIST 9
USMC

Commandant of the Marine Corps
Headquarters, U.S. Marine Corps
Code MPI-20
Washington, DC   20380

Headquarters, U.S. Marine Corps
ATTN: Dr. A. L. Slafkosky,
  Code RD-1
Washington, DC   20380

LIST 12
ARMY

Army Research Institute
Field Unit - Monterey
P.O. Box 5787
Monterey, CA 93940

Deputy Chief of Staff for
   Personnel, Research Office
ATTN: DAPE-PBR
Washington, DC 20310

Headquarters, FORSCOM
ATTN: AFPR-HR
Ft. McPherson, GA 30330

Army Research Institute
Field Unit - Leavenworth
P.O. Box 3122
Fort Leavenworth, KS 66027

Technical Director   (2 copies)
Army Research Institute
5001 Eisenhower Avenue
Alexandria, VA 22333

LIST 13
AIR FORCE

Air University Library/LSE 76-443
Maxwell AFB, AL   36112

DEPARTMENT OF THE AIR FORCE
Air War College/EDRL
Attn: Lt Col James D. Young
Maxwell AFB, AL   36112

AFOSR/NL (Dr. Fregly)
Building 410
Bolling AFB
Washington, DC   20332

Air Force Institute of Technology
AFIT/LSGR (Lt. Col. Umstot)
Wright-Patterson AFB
Dayton, OH   45433

Technical Director
AFHRL/ORS
Brooks AFB
San Antonio, TX   78235

AFMPC/DPMYP
(Research and Measurement Division)
Randolph AFB
Universal City, TX   78148

LIST 15
CURRENT CONTRACTORS

Dr. Clayton P. Alderfer
School of Organization
   and Management
Yale University
New Haven, CT 06520

Dr. H. Russell Bernard
Department of Sociology
   and Anthropology
West Virginia University
Morgantown, WV 26506

Dr. Arthur Blaiwes
Human Factors Laboratory, Code N-71
Naval Training Equipment Center
Orlando, FL 32813

Dr. Michael Borus
Ohio State University
Columbus, OH 43210

Dr. Joseph V. Brady
The Johns Hopkins University
   School of Medicine
Division of Behavioral Biology
Baltimore, MD 21205

Mr. Frank Clark
ADTECH/Advanced Technology, Inc.
7923 Jones Branch Drive, Suite 500
McLean, VA 22102

Dr. Stuart W. Cook
University of Colorado
Institute of Behavioral Science
Boulder, CO 80309

Mr. Gerald M. Croan
Westinghouse National Issues
   Center
Suite 1111
2341 Jefferson Davis Highway
Arlington, VA 22202

Dr. Larry Cummings
University of Wisconsin-Madison
Graduate School of Business
Center for the Study of
  Organizational Performance
1155 Observatory Drive
Madison, WI   53706

Dr. John P. French, Jr.
University of Michigan
Institute for Social Research
P.O. Box 1248
Ann Arbor, MI   48106

Dr. Paul S. Goodman
Graduate School of Industrial
  Administration
Carnegie-Mellon University
Pittsburgh, PA   15213

Dr. J. Richard Hackman
School of Organization
  and Management
Yale University
56 Hillhouse Avenue
New Haven, CT   06520

Dr. Asa G. Hilliard, Jr.
The Urban Institute for
  Human Services, Inc.
P.O. Box 15068
San Francisco, CA   94115

Dr. Charles L. Hulin
Department of Psychology
University of Illinois
Champaign, IL   61820

Dr. Edna J. Hunter
United States International
  University
School of Human Behavior
P.O. Box 26110
San Diego, CA   92126

Dr. Rudi Klauss
Syracuse University
Public Administration Department
Maxwell School
Syracuse, NY 13210

Dr. Judi Komaki
Georgia Institute of Technology
Engineering Experiment Station
Atlanta, GA 30332

Dr. Edward E. Lawler
Battelle Human Affairs
  Research Centers
P.O. Box 5395
4000 N.E., 41st Street
Seattle, WA 98105

Dr. Edwin A. Locke
University of Maryland
College of Business and Management
  and Department of Psychology
College Park, MD 20742

Dr. Ben Morgan
Performance Assessment
  Laboratory
Old Dominion University
Norfolk, VA 23508

Dr. Richard T. Mowday
Graduate School of Management
  and Business
University of Oregon
Eugene, OR 97403

Dr. Joseph Olmstead
Human Resources Research
  Organization
300 North Washington Street
Alexandria, VA 22314

Dr. Thomas M. Ostrom
The Ohio State University
Department of Psychology
116E Stadium
404C West 17th Avenue
Columbus, OH 43210

Dr. George E. Rowland
Temple University, The Merit Center
Ritter Annex, 9th Floor
College of Education
Philadephia, PA 19122

Dr. Irwin G. Sarason
University of Washington
Department of Psychology
Seattle, WA 98195

Dr. Benjamin Schneider
Michigan State University
East Lansing, MI 48824

Dr. Saul B. Sells
Texas Christian University
Institute of Behavioral Research
Drawer C
Fort Worth, TX 76129

Dr. H. Wallace Sinaiko
Program Director, Manpower Research
and Advisory Services
Smithsonian Institution
801 N. Pitt Street, Suite 120
Alexandria, VA 22314

Dr. Richard Steers
Graduate School of Management
  and Business
University of Oregon
Eugene, OR 97403